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BROILER PRODUCTION
IN THE
GAINESVILLE, GEORGIA AREA

by

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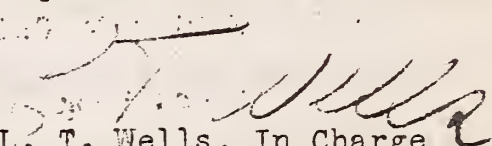
INTRODUCTION

The rapid growth of the broiler industry in North Georgia is one of the interesting agricultural developments in the Southeast during wartime.

The need for accurate information as to costs and basic economic factors underlying the development of this industry prompted the accompanying study.

We want to express our sincere appreciation for the cooperation of L. C. Rew, Gainesville, Georgia, County Agent in Hall County, and also the very splendid assistance given Mr. Frazier by a number of feed dealers, dressing plant operators, and producers of poultry.

We hope the information obtained in this analysis of the broiler industry will be helpful to those in the industry and others who are interested in the sound progress of this important development.


L. T. Wells, In Charge
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BROILER PRODUCTION IN THE GAINESVILLE, GEORGIA, AREA

Commercial broiler production as an industry in Georgia is still in its infancy -- but it's getting a robust start, and has the promise of a flourishing future.

The three counties in which most of the broilers of this area are produced on a commercial scale are Hall, Forsyth, and Cherokee. The size of the industry in these counties would be in the same order as they are listed. Although Habersham, Lumpkin, Dawson, Jackson, Barrow, White, Walton, and Fulton Counties form a part of this broiler area, the total number produced in each represents a relatively small volume of birds in comparison to the three major counties.

The estimated number of broilers to be sold from these counties, by weekly periods, from December 4, 1944, to February 6, 1945, is shown graphically on Page 4. This estimate is based on a breakdown by counties of sales of all baby chicks made by dealers in Hall and Forsyth Counties. Exact data as to baby chick sales during this period were obtained from dealers in Cherokee County, who, according to estimates from several sources, sell about one-third of all baby chicks producers purchase in that county. This information was used as a basis for estimating total sales.

Accurate statistics as to the total number of broilers sold from this area last year are not readily available. However, estimates received indicate the number to be from 25 million to 30 million birds, having a sales value of about 20 to 25 million dollars. An industry so large, yet concentrated in a relatively small area, brings with it many production and marketing problems. Therefore, the purpose of this study is to analyze briefly some of these problems. Under wartime conditions -- with labor shortages, limited transportation facilities, over-production, black market prices, relatively high feed and equipment costs -- such problems have become increasingly important.

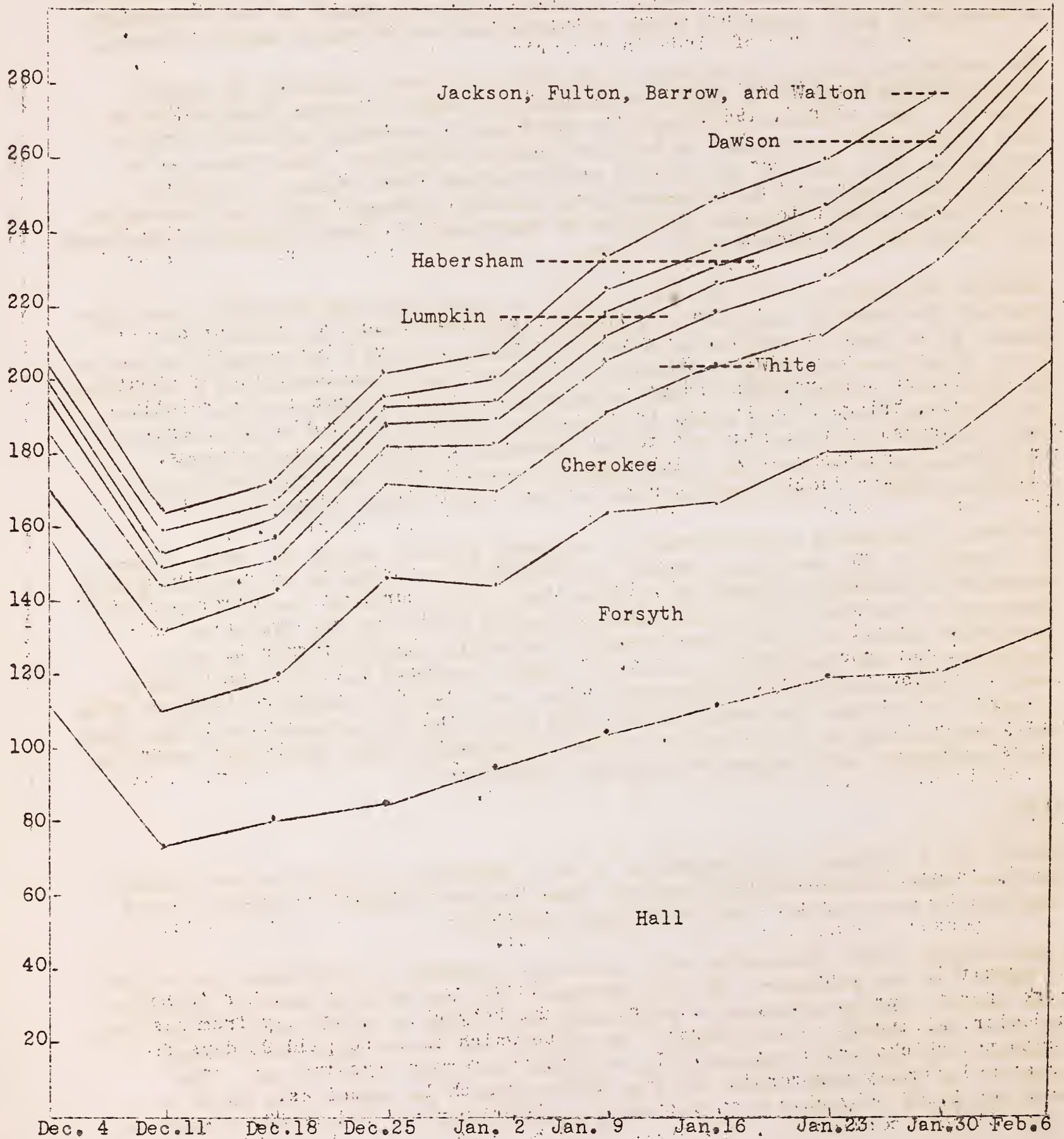
The broiler industry of this area has expanded greatly during the war. Since it is still in the period of growth, its eventual size during the postwar period cannot be accurately determined at this time, but the income received from this industry is, and will be in the future, greatly needed by the farmer to supplement income received from cotton. Generally speaking, land in this section is of low fertility. Acreage of crops produced for livestock feed is small. From the farmer's standpoint, there is a definite economic need for this industry to continue for many years. What can he do to increase his income from broilers? How can he sell them to a better advantage? These questions, vital as they undoubtedly are, represent only the beginning.

Credit

First, let's consider the foundation of this industry -- credit -- and discuss problems that are encountered from the time the baby chicks are hatched until they have passed through local marketing channels.

Since credit is the foundation of the broiler industry in this area, here's how it works for the producer. He will purchase the baby chicks, usually from his feed dealer, giving in return a promissory note which is to be paid 90 days from the date the chicks are delivered. In return, the farmer pays two percent interest and usually a recording fee of \$1.50 for each 1,000 chicks. The interest on 1,000 baby chicks sold to him at \$16.00 per hundred is \$3.20 -- with the \$1.50 recording fee, the total would be \$4.70. When these chicks are

GAINESVILLE BROILER PRODUCTION AREA
Number of Broilers to be Sold, by Counties and Weekly Periods
December 4 - February 6



sold as broilers, the producer pays the original note amounting to \$160.00 and an additional 2.94 percent for interest and recording. If this figure is increased to the twelve-month equivalent, chicks purchased on credit will cost about twelve percent more than they would had cash been paid at the time of purchase. Usually, the producer will purchase feed, medicine, insurance, and equipment on a credit basis from the same dealer who sold the chicks. These items are paid when the broilers are sold 85-90 days later. Since the chick and feed dealers usually buy the broilers after they are raised, they deduct all items of expense -- such as chicks, interest, insurance, equipment, and medicine -- from the producer's account and pay him the remainder.

The feed dealer does not specify any interest charge on credit purchases other than for baby chicks. For profit from such sales, he depends upon the margin between the wholesale price and the retail ceiling price.

The vital influence of credit in this production program may readily be understood. Risks feed dealers face in furnishing such credit should be considered. Sometimes they experience losses because individual producers fail to pay their accounts in full, or sell their birds elsewhere and fail to pay them at all. Even though such instances represent only a very small percentage of the total number of accounts a dealer may have with producers, they are a factor affecting his net profit. During seasonal broiler surpluses, when prices are low, they become a major factor. Were it not for such risks, it is likely that the majority of dealers in this area would operate upon a smaller margin of profit. Consequently, credit increases the cost of production. Many dealers will reduce the price of feed from ten to fifteen cents per hundred on cash transactions. Suppose the price is reduced only ten cents per hundred, or \$2.00 per ton. After feeding to market age and weight four consecutive broods of 1,000 day-old baby chicks each, the producer would save slightly more than nine percent on his total feed bill for the four 90-day periods.

This credit system is costly to the producer and risky to the feed dealer. Naturally, the grower would prefer to pay cash if it were available. Such action should also meet with the approval of many dealers, because at the present above 95 percent of the average dealer's sales to producers are based on credit. Fundamentally, the producer is to assume production losses, regardless of whether such production is financed on a cash or credit basis. Cash purchases are good insurance that such losses would not be transferred to the feed dealers. Competition among feed dealers is sufficiently active to bring lower prices when this risk is eliminated.

Feed Dealers

Since credit is the very foundation of the broiler industry, the feed dealer and his services have an important part in the picture. He, as a rule, is interested in more than sales of chicks, feed, and equipment. In a very direct way, he has a financial interest in almost every broiler produced from items he sells. As a result, some of the large dealers at Gainesville employ as many as three men to help producers with production problems. When disease develops in a brood of chicks, these men are sent to the farm to recommend methods to use in controlling that disease. They help reduce mortality rates, improve production practices, and serve both the producer and feed dealer in a very worthwhile way.

The largest dealers in this area specialize in furnishing all items necessary to broiler production. In other words, they operate a poultry feed and supply store. This type of dealer can be found in Gainesville, Cumming, or Canton. Too, crossroad stores in rural areas have added baby chicks, feed, and equipment to the items they already sell. Of course, they operate on a relatively small scale in comparison to the large dealers, though they render about the same services, and extend credit to farmers, covering the major costs of broiler production on from 50,000 to 75,000 birds for each 90-day period.

One of the most vital services rendered by this group is that of transportation. Usually, they take the baby chicks, feed equipment, etc., directly to the producer's farm. When broilers reach market age and weight, it is usually the feed dealer who buys the birds, paying on the basis of farm weight, and then hauling them to market.

Feed dealers in this area, under existing conditions, are extremely important to the broiler industry. For, without services he has rendered, it may never have grown so rapidly or so large as it is today.

Value of Houses and Equipment

The brooder house most frequently used in this area is one with a shed-type roof built with rough pine lumber. The outside is covered with building paper. Such houses, usually 20'x20', are used to brood from 700 to 1,200 baby chicks. Frequently, growers are inclined to overcrowd birds in such houses, with higher mortality rates as a result. Dirt floors, which predominate in these buildings, are covered with a thick layer of litter.

The cost of constructing these houses, of course, has increased considerably during the war period. In 1940, they could be built for about \$150; but similar houses constructed recently have cost approximately \$200.

Wood, coal, and electric brooders are used in this area -- with wood and coal brooders predominating. They, of course, are made by a number of different companies, and their efficiency varies considerably. Although it is advisable to use two brooders in a 20'x20' house, many producers use only one. After a number of interviews with producers and feed dealers, we estimated that the value of brooders used in growing 1,000 baby chicks would average \$45.00. When coal is used, we estimated the fuel cost to be three cents per chick during winter months and two cents per chick during the summer months. Wood used for fuel usually comes from the producer's farm, and therefore it's much more difficult to estimate accurately the value of the wood and the labor cost involved in getting such fuel ready for use.

The cost of feeders and water fountains used will vary a great deal from one producer to another. Some use "homemade" feeders and water fountains, while others purchase such items from their feed dealer. Fifteen dollars, according to several in this area, would represent a reasonable value to place upon feeders and water fountains now used per 1,000 chicks by most producers.

Since dirt floors are found in the majority of brooder houses, litter costs are considerable. "Pine straw", gathered from nearby woodlands, shavings, and Servall are the most popular types of litter used.

Pine straw, or pine needles, does not have good absorbent qualities, and is not as satisfactory as some other types of litter. It is used primarily because of its low cost. Shavings make satisfactory litter. Before the broiler industry in this area grew to its present proportions, they could be obtained for only the hauling charge from the lumber yard to the producer's farm. There are no ceiling prices on shavings, and demand for them as litter in brooder houses has increased so greatly that now producers are paying \$10.00 per truck load delivered to the farm. The volume or weight of a truck load of shavings is difficult to determine. They are not purchased on a weight basis. The producer receives as many shavings as can be loaded in the bed of a $1\frac{1}{2}$ -ton truck. Servall, a by-product of the sugar industry, and made from cane stalks, is occasionally used for litter. The cane stalks have been cut in such a way as to resemble ensilage, then dried. It makes an excellent litter, and has good absorbent qualities. This material is handled by the feed dealer and sold to the producer on credit. When Servall is used, the litter cost per 1,000 birds is somewhat more than if shavings were used. However, the demand for shavings at the present is greater than the available supply, and other types of litter must be used. Oat, wheat, rye, and barley straw are not available.

After baby chicks are placed in a brooder house, the original litter is not removed until after they have been sold as broilers. Once or twice per week new litter is added to promote dryness and cleanliness.

Baby Chicks

To continue the broiler industry of this area, from 30 to 40 million baby chicks are purchased annually, and a sizable local hatchery industry has developed as a result. Approximately ten percent of this number are lost through mortality; and the remainder are sold as broilers, kept on the farm for egg production, or used for home consumption.

Baby chicks purchased for broiler production come from hatcheries located within the area, or are shipped from hatcheries in other states -- principally New Hampshire and Connecticut.

Eight of the hatcheries within the area are located in Gainesville, two in Cumming, two in Canton, and one at Pine Mountain. Although some of their sales are directly to producers, their greatest volume is sold to local feed dealers, who, for a commission of approximately two cents per chick, distribute them to producers. These hatcheries depend upon eggs produced locally for the support of their phase of the broiler industry. Consequently, during late summer and early fall months, the majority of them discontinue operations due to the seasonal shortage of locally produced eggs for hatchery purposes. In November, they resume operation and, as more eggs become available, gradually increase the volume of chicks hatched until soon after the first of the year when they reach capacity.

The volume of local egg production and the number of chicks hatched by local hatcheries are closely related. Both follow the same seasonal trends. When

egg production in this area reaches its peak, hatcheries operate at capacity -- and when egg production reaches its lowest levels, most hatcheries are closed.

Broiler production in this area is also seasonal to a large extent; consequently, the largest number of birds move to market during spring and summer months. However, large shipments of chicks from New England states during fall and early winter months overcome to some extent the wide variation in the volume of locally hatched chicks.

These shipped chicks arrive in Gainesville in express cars. From there, they are distributed by two men--agents for a number of northern hatcheries -- to feed dealers over the entire area. One of these men handled about 900,000 baby chicks between June and December of this year. About 80,000 of this number were received in September, 150,000 in October, and 300,000 in November. His chick sales for the first six months of the year are relatively small in comparison. The other agent handles about 118,000 chicks per month and states the number handled from week to week throughout the year does not vary a great deal. Six express cars of baby chicks arrived in Gainesville during the week ending November 18. Each express car will contain about 40,000 chicks during winter months and 30,000 during summer months. From this information, you can readily see that shipped chicks serve as an important supplement to the local hatchery industry.

The price producers pay for baby chicks seems to be subject to minor seasonal variations. This is indicated by data contained in the table below:

PRICES PRODUCERS PAID FOR BABY CHICKS BY MONTHLY PERIODS -- AUGUST 1943-AUGUST 1944					
Month	No. Chicks	Cost Per Chick to Producer (in cents)	Month	No. Chicks	Cost Per Chick to Producer (in cents)
August 1943	1,000	15.00	March 1944	23,400	14.45
September	7,800	15.74	April	4,700	14.62
October	12,950	15.85	May	12,200	14.56
November	2,400	15.00	June	11,100	14.10
December	11,250	14.46	July	21,300	14.34
January 1944	13,950	14.29	August	7,790	15.10
February	11,300	14.28	TOTAL	141,140	14.64

The above information was assembled from records of chick costs for 77 producers who, during the thirteen-month period shown above, purchased 141,140 birds.

The cost per chick represents purchases of both shipped and locally hatched birds. Periods of low egg and broiler production are the periods chick prices were at their highest levels.

Poultry breeds preferred in this commercial broiler area are Barred Plymouth Rocks and New Hampshire Reds. A cross of the Barred Plymouth Rock with the New Hampshire Red is one of the most popular crossbreeds in the area. Since major attention in this study was devoted to an analysis of production costs, statistical data was not obtained in regard to the comparative demands of the various breeds and crossbreeds.

Chick mortality is the greatest hazard and perhaps the most difficult problem in broiler production facing producers, feed dealers, and hatcherymen of this area.

The seriousness of this problem is clearly indicated by data given below:

	Oct., Nov., : and Dec. 1943	Jan., Feb., : and March 1944	Apr., May, : and June 1944	July, Aug., : and Sept. 1944
Number of Producers	20	23	19	17
Number of Chicks Purchased	35,400	48,650	28,000	32,090
Percent Mortality with Adjustment	12.45	12.17	10.00	7.28
Percent Mortality without Adjustment	17.75	14.93	10.8	11.02
Cost Per Chick Raised with Adjustment	\$.1867	\$.1641	\$.1600	\$.1568
Cost Per Chick Raised without Adjustment	\$.1938	\$.1687	\$.1612	\$.1631

The 79 producers that raised the 144,140 birds shown in this table represent a reasonably accurate cross section of all producers. Some are good, some average; others are below average. Some were successful in keeping mortality rates very low. With others, it was high.

Some feed dealers and hatcheries deduct from the original cost of the chicks the value of all losses greater than five percent that occurred within ten days or two weeks after the chicks reach the farm. For example, if a farmer purchased 1,000 day-old baby chicks, and if 150 of these chicks died within ten days after they were delivered, then the feed dealer would credit the producer's account with the original sales value of 100 chicks -- so actually the producer would pay for only 900 chicks. As can be seen from the above table, such adjustment can lower the total mortality rate as much as an average of five percent during certain seasons of the year.

This adjustment is also reflected in the total chick cost per bird sold, and, as can be seen from an examination of the above table under items "Cost Per Chick Raised - with Adjustment" and "Cost Per Chick Raised - without Adjustment," it sometimes reduces the chick cost almost a cent per bird sold during seasons of high mortality.

Periods of highest mortality in this area are in October, November, and December. There is a general belief among poultrymen and feed dealers in the vicinity of Gainesville that mortality rates from "shipped chicks" generally are higher than from those hatched locally. Since the largest percentage of shipped chicks received during the year arrive during this period, it seems likely data in the above table would confirm that belief. However, during January, February, and March, the mortality rate "without adjustment" is 14.93 percent and only about three percent lower than for the previous quarter period. Chicks received soon after the first of the year are largely locally hatched chicks. Frequently, coccidiosis, brooder pneumonia, range paralysis, and other diseases are the cause of high mortality rates. But in this area, where large losses are felt during months of cold weather, considerably more thought should be given adequate housing, proper heating of these houses, and better care of chicks from the time they leave the hatchery until they reach the farm.

The mortality figures we have given are helpful only if interpreted properly. It's quite likely that the average producer experiences his greatest losses from chicks started during late spring and summer months. But the unsuccessful producer is so much more unsuccessful during the winter months, when his chick losses frequently exceed 30 percent, that a higher mortality rate results when an attempt is made to strike an average mortality rate for the entire group.

Feed

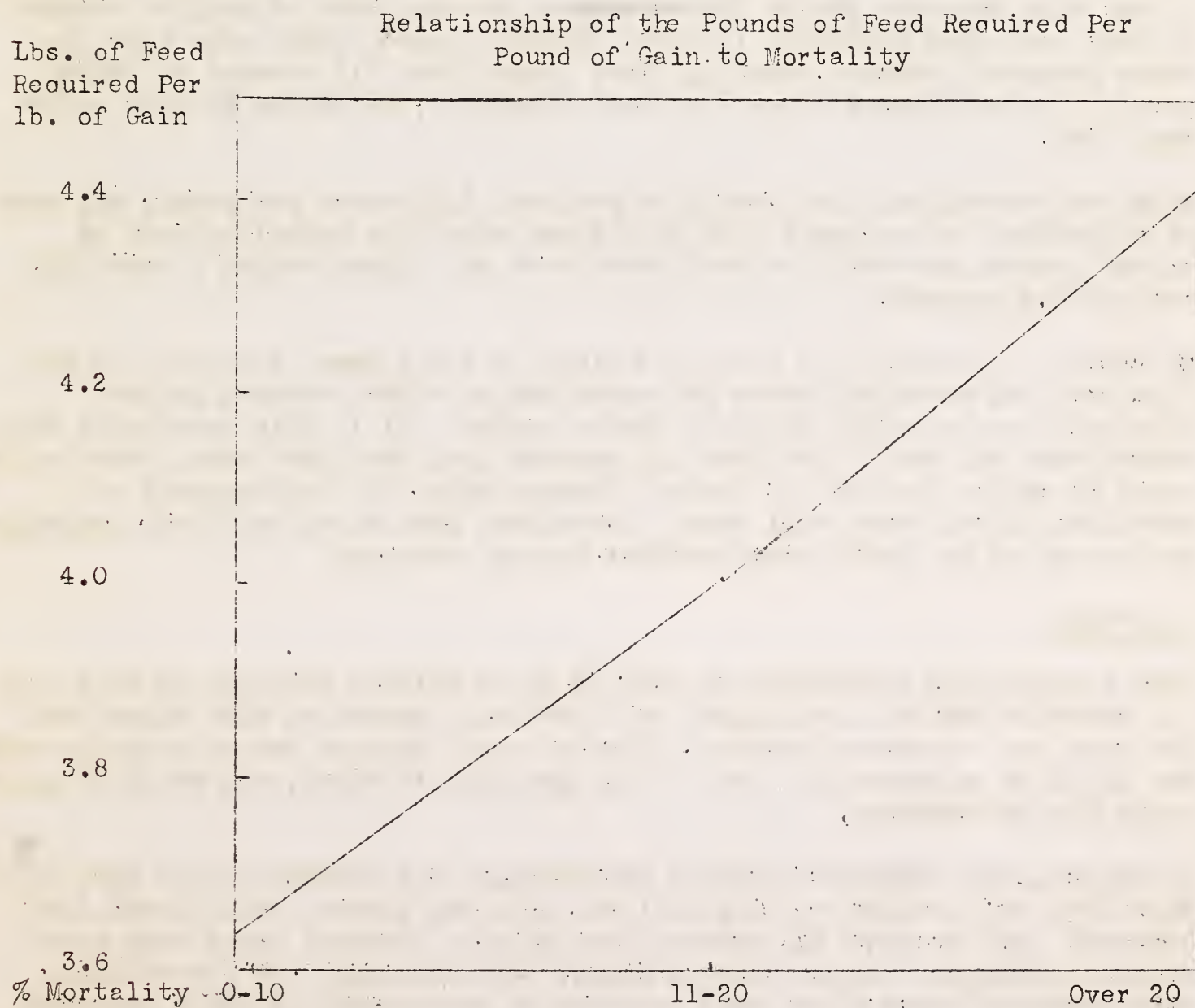
Broilers produced in the Gainesville area are fed commercial broiler mashes and pellets. Although we shall make no attempt to appraise, in a comparative way, the pounds of feed required per pound of gain or the cost of feed per pound of gain of one brand of feed with another, we did include feed records of broilers produced from feeds sold by almost all feed companies represented in this territory:

	FEED COST AND FEED CONSUMED			
	Oct., Nov., and Dec.	Jan., Feb., and March	Apr., May, and June	July, Aug., and Sept.
	1943	1944	1944	1944
Number of Producers	20	23	19	17
Number of Chicks Purchased	35,400	48,650	28,000	32,090
Percent Mortality (without Adj.)	17.75	14.93	10.08	11.02
Feed Cost Per Pound of Gain	\$.167	\$.171	\$.175	\$.163
Pounds of Feed Req. Per Lb. of Gain	3.91	3.94	3.97	3.84
Average Market Weight Per Bird (Lbs.)	2.75	2.84	2.83	2.76

Variations in the above data are so minor that, rather than dwell on minor seasonal differences, we shall discuss factors which, when brought together, form averages on an item for all seasons, and their effect upon the efficiency of production and production costs.

First, how does the mortality rate affect the pounds of feed required per pound of gain and the cost of feed per pound of gain?

From the group of 79 producers included in this study, the mortality rate for 45 was ten percent, or below, and 3.64 pounds of feed were required per pound of gain. Mortality rates for fifteen of the producers were from eleven to twenty percent. With this mortality rate, 4.05 pounds of feed were required per pound of gain. When the mortality rate increased to over twenty percent, as it did for eighteen producers included in this study, the amount of feed required per pound of gain increased to 4.42 pounds. This definite trend for the amount of feed required per pound of gain to increase as mortality increases is shown graphically below:



This tendency results from the fact that before a chick dies it usually eats some feed, and the quantity of feed consumed by such birds must be charged to those marketed as broilers.

To clearly show the result of mortality in relation to feed costs, suppose we have two producers. One lost 7.2 percent of the chicks started -- the average for the 45 producers in the low mortality group. The mortality rate for the other was the average for the 18 producers in the high mortality group, or thirty percent. We shall assume that each producer fed exactly the same feed, gave the chicks equal care, brooded them in houses of the same construction, and provided the proper amount of heat at all times. Both broods were raised under exactly the same conditions. But coccidiosis, brought into the brooder house from infected grounds just outside, increased the mortality rate to thirty percent for one of the producers before it finally ran its course. Let's suppose that both producers sold 2,500 pounds of broilers. Since .78 pounds more feed were required per pound of gain in the flock with thirty percent mortality, this producer had to feed 1,950 additional pounds of feed to obtain three-pound birds having the same total market weight as did the producer who raised the brood in which the mortality was only 7.2 percent. Therefore, both producers sold the same number of pounds of broilers, but the one who experienced the high mortality rate had a feed bill that was \$84.24 (based upon an average cost of broiler rations in this area from September 1, 1943, through August, 1944) more than the other producer, because, when his loss jumped from 7.2 percent to thirty percent, the additional birds lost had consumed 1,950 pounds of feed before they died.

Since the average cost of feed last year was 4.32 cents per pound, the cost of producing a three-pound bird in a flock where the mortality rate is thirty percent is about ten cents more than in a flock having a mortality rate of 7.2 percent.

Of course, the example we have just given is based upon an average of the feed cost and mortality rates for thousands of birds produced in the Gainesville area within the last twelve months. It is only reasonable that chicks that die when a few days old consume less feed than those four to six weeks of age at the time of death. Consequently, the relationship of mortality to feed cost will vary a great deal from flock to flock, depending on the age of the birds when greatest losses occurred.

Marketing

Such a tremendous production of from 25 to 30 million broilers in this area has necessitated the development of a marketing system to move birds from the farm into consumer channels. Here we shall discuss how this system works, who keeps it in operation, some of the problems it faces, and where it moves birds for consumption.

In general, the producer's market for broilers may include one or more of the four types of handlers -- feed dealers, dressing plants, independent local truckers, and truckers who operate largely on a seasonal basis from some distant consuming center, such as Miami, St. Petersburg, or New Orleans. Some birds, of course, are sold directly to restaurants or other consumers locally; but the number sold in this manner is so small that it does not influence prevailing market conditions or prices.

Previously, we have described certain influences the feed dealer has upon the broiler industry and credit system under which he operates. He also has an important part to play in moving birds to market. When broilers reach market age and weight, the producer usually sells them to his feed dealer, pays his account from the sales value of the birds, and starts planning for the next brood of chicks. Under normal conditions, the feed dealer can pay the producer ceiling prices based upon farm weights, sell the broilers to a local dressing plant or truck them to Atlanta, Birmingham, Columbus, or Savannah, and receive a price that's a reasonable compensation for services rendered. However, wartime markets and conditions react in such a way that only during a relatively small portion of the year are markets stabilized. From October through March demand for broilers in this area is considerably greater than available supplies. During this period, producers market only a small portion of their birds through their local feed dealer since they can usually obtain more favorable prices elsewhere. The other period during the year when markets of this area are abnormal is from June through the early part of September. At this time, supplies of broilers reach their peak season and frequently are moved to market at prices substantially below ceiling. When this period is reached, undoubtedly producers look to the feed dealer for leadership in maintaining the highest possible price levels. Since the feed dealer also has a financial interest in the broilers, he will try to find a good market and pay the producer as much as possible. If he doesn't do this, there is a good possibility the birds will sell for less than the cost of feed, with the result that the farmer likely will discontinue broiler production at least temporarily. As a result, the feed dealer will sell less feed, equipment, and baby chicks. So it's easy to understand why the feed dealer is interested in paying or helping the producer secure at least a satisfactory market price for broilers.

Processing plants are another type of handler. Six processing plants or poultry dressing plants are located in this area -- four in Gainesville, one in Cumming, and one in Canton. When operating at maximum capacity -- one eight-hour shift, five days a week -- they can dress a total of 210,000 birds. Although some of these plants purchase broilers directly from producers, they depend upon the feed dealers to furnish them with most of the live poultry they purchase.

The number of birds dressed in these plants from week to week varies seasonally, and has a direct relationship to the volume of live poultry moving to market. Plants operate from one to three days per week only during the October-January period, because it is not possible to obtain a larger supply of live poultry. In 1944, this condition of scarcity developed early in October, and only after the middle of December did the marketable supply of broilers begin to increase. During this same period, as indicated by the graph on Page 4, the number of broilers being sold was approximately three times greater than the number being handled by processing plants within the area. Why was not a greater number handled through local plants? Both the plants and dealers were paying ceiling prices to the producer at the farm, or 28.80 cents per pound. However, truckers operating from outside the area, frequently from cities in other states several hundred miles from Gainesville, were paying producers a price equivalent to from 32 to 36 cents per pound. A few local operators were engaging in this practice to a limited extent.

Some would pay the ceiling price, but give the producer ten dollars to help load the chickens -- and probably an hour at the most was required for this task. Other would pay 28.80 cents per pound for the birds; but, while visiting the producer, arrange to lose a fifty-dollar bet, for example. Of course, such practices made strict enforcement of ceiling prices by OPA extremely difficult. The processor who, in good faith, was abiding by ceiling prices, faced competitive conditions impossible for him, as an individual, to overcome. Even though a supply of birds which would have kept them operating at capacity during most of the winter months was available in their trading area, they were unable to compete with prices from three to five cents above ceiling. Result: it became necessary to reduce their operation in proportion to their available supply of live birds. In such a period, many producers are to be commended for their honesty because they refused to sell their birds at inflationary prices, and, instead, sold them through established local market channels. In some instances, they showed remarkable loyalty toward their feed dealer and local processor. This was the group who enabled the processor to operate from one to three days per week.

Back of this loyalty is a reason. Last summer, especially during July and August, a surplus of broilers developed in local markets -- a surplus so serious that some producers held them on the farm until they weighed more than four pounds before they were sold. Prices in many instances dropped from 28.80 cents per pound to 22 and 23 cents per pound, and the gross return to the producer who sold at such prices was less than the feed cost in some cases. Processors of the area operated at capacity during this period. Some even worked their employees overtime to move a greater quantity of birds. It is significant that, during this period, processors and feed dealers who sold their birds to local processors continued to pay the ceiling price, or 28.80 cents per pound, to the producer. There is no question -- they could have been purchased for less. Operators of dressing plants believed the best possible plan to keep chickens coming to them during future months and years was to do everything possible to enable the producer to make a reasonable labor income from broiler production. Fortunately, demand for dressed poultry from civilians and the armed forces was good. The surplus was not national. This plan has already started to pay dividends.

The total amount of dressed poultry purchased by the Army Quartermaster Corps from processors in this area has been considerable, even though the exact amount is not available for publication. One of the largest processing plants in Gainesville sold more than two million pounds of dressed poultry to the Army between July 1, 1943, and July 1, 1944. Others sold smaller quantities. Some of this poultry was frozen, shipped by rail to Miami and other ports for export to armed forces overseas. A part of the frozen and all of the ice-packed poultry purchased by the army was consumed by soldiers in training camps located principally in the South. Additional refrigeration space and equipment in dressing plants would have resulted in the armed forces receiving a larger portion of the total supply of poultry.

Since processing plants during November and December of this year were not in a favorable position to meet local competitive prices, they handled only a small volume of poultry. Thus, they were able to ship dressed birds purchased by the army in very small quantities or not at all.

Outside truckers -- those from distant Florida, Alabama, or Louisiana markets -- exert a tremendous influence on the price of broilers in this area. They bring with them certain advantages and, during certain seasons, create difficult marketing problems. Only during a few weeks in the year would it be possible for local dressing plants to process all birds ready for market. Therefore, these trucks, with their contacts in distant markets, supplement the activities of certain feed dealers who market live birds in cities close to the area. Some of these truckers are strictly market speculators. They create for themselves unfair competitive advantages during periods when broiler production is low by paying black market prices. When a surplus of broilers develops, they pay the lowest possible price required to purchase the birds, even though they may be in a position to sell them for more than their usual handling charge to the consumer or to other dealers. Since losses to producers often result from sales to these truckers during summer months, when local market channels are overcrowded, this should have a tendency to adjust production to market demands. If all producers received a uniformly low price during this period, perhaps this effect would result. But what would discourage the producer's belief, three months before the broilers are sold, that he would be one of those who would continue to sell at ceiling price through the months of surplus production in this area?

Approximately 60 independent local truckers supplement activities of feed dealers and processors by hauling live poultry. Usually they are employed for certain trips by one of the types of handlers previously discussed.

SUMMARY

Factors Affecting Production Costs, Gainesville, Georgia, Broiler Area

Item	1943	1944	1944	1944
	Oct., Nov., Dec.**	Jan., Feb., Mar.**	Apr., May, June**	July, Aug., Sept.**
Number of Producers	20	23	19	17
Number of Chicks Purchased	35,400	48,650	28,000	32,090
Feed Cost Per Pound of Gain	\$0.16713	\$0.17108	\$0.1755	\$0.16309
Pounds of Feed Required Per Pound of Gain	3.914	3.937	3.97	3.84
Average Market Weight Per Bird (Pounds)	2.7514	2.844	2.83	2.7605
Percent Mortality with Adjustment	12.45	12.17	10.00	7.28
Percent Mortality without Adjustment	17.75	14.93	10.8	11.02
Cost Per Chick Raised with Adjustment	\$0.186688	\$0.1641	\$0.160	\$0.15684
Cost Per Chick Raised without Adjustment	\$0.19638	\$0.1687	\$0.1612	\$0.16314
Average Feed Cost Per Bird	\$0.459695	\$0.4865	\$0.4971	\$0.45022
Average Cost of Misc. Items Per Bird*	\$0.010124	\$0.008656	\$0.0113	\$0.0991
Average Sales Value Per Bird	\$0.781832	\$0.83568	\$0.80342	\$0.7950

* Insurance, Medicine, and Interest on Baby Chicks

** Period baby Chicks were Started

PERCENTAGE OF THE SALES VALUE OF BROILERS ABSORBED BY FEED COSTS

Item	: 1943	: 1944	: 1944	: 1944
	: Oct., Nov.,	: Jan., Feb.,	: Apr., May,	: July, Aug.,
	: Dec.	: March	: June	: Sept.
1. Average Price of Feed Per 100 pounds	\$ 4.37	\$ 4.34	\$ 4.42	\$ 4.25
2. Average Selling Price of Broilers per pound	\$.2837	\$.2877	\$.2939	\$.2880
3. Average Mortality Rate (Percent)	17.75	14.93	10.8	11.2
4. Average Market Weight Per Bird (Lbs.)	2.75	2.84	2.83	2.76
5. *Percentage of Gross Sales Value of Birds Represented by Feed Cost	58.8	58.2	61.9	56.6
6. **Percentage of Gross Sales Value of Three- Pound Birds Represented by Feed Cost	57.19	56.81	57.64	55.6

* These percentage factors are applicable when Items 1 through 4 are used.

** Based upon the supposition of a selling price of birds at 28.80 cents per pound, a ten percent mortality rate, and an average market weight of three pounds per bird. These percentage factors will then show how the above feed prices increase or decrease the amount of money remaining after feed costs have been paid.

PRODUCTION COSTS - 1,000 BROILERS ***
Oct., Nov., and Dec. - 1943 **

RECEIPTS

Adjustment by dealer for loss of 53 chicks	\$ 8.56
Value of litter as manure at end of brooding season (estimate)	10.00
Sale of 823 birds weighing 2,263 pounds @ 28.77¢ per pound	651.07
TOTAL	\$ 669.63

EXPENSES

1,000 day-old baby chicks	161.52
Interest on chicks and recording charge	3.71
8,859 pounds of feed	387.11
Medicine	1.57
Insurance	3.45
One load of shavings for litter (estimate)	10.00
Fuel cost - coal (estimate)	30.00
Depreciation on brooder house and cost of upkeep @ \$35 per year on a house valued at \$175 used 9 months per year is \$3.22 per month, or for 90 days (estimate)	9.66
Depreciation and upkeep cost on equipment \$12 per year, or \$1.33 per month, based upon nine months usage (estimate)	3.99
Interest on investment of \$235 in house and equipment @ 3%* per year is \$18.80 annually, or \$2.09 per month, based upon 9 months usage	6.27
TOTAL	608.28

LABOR INCOME \$ 61.35

* Legal banking interest rate in Georgia

** Period baby chicks were started

*** Based upon records of 20 producers and 35,400 day-old baby chicks

PRODUCTION COSTS - 1,000 BROILERS *
Jan., Feb., March - 1944 **

RECEIPTS

Adjustment by dealer for loss of 27 chicks	\$ 3.88
Value of litter as manure at end of brooding season (estimate)	10.00
Sale of 851 birds weighing 2,421 pounds @ 29.39 per pound	712.71
TOTAL	\$ 726.59

EXPENSES

1,000 day-old baby chicks	143.64
Interest on baby chicks and recording fee	3.60
9,533 pounds of feed	414.27
Medicine	1.92
Insurance	3.14
One load of shavings for litter (estimate)	10.00
Fuel cost - coal (estimate)	30.00
Depreciation on brooder house and cost of upkeep @ \$35 per year on a house valued at \$175 used 9 months per year is \$3.22 per month, or for ninety days (estimate)	9.66
Depreciation and upkeep costs on equipment \$12 per year, or \$1.33 per month, based upon 9 months usage annually (estimate)	3.99
Interest on investment of \$235 in house and equipment @ 8% per year is \$18.80 annually, or \$2.09 per month, based upon 9 months use per year	6.27
TOTAL	626.49

LABOR INCOME	\$ 100.10
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* Based upon records of 23 producers and 48,650 day-old baby chicks
** Period baby chicks were started

PRODUCTION COSTS - 1,000 BROILERS *
April, May, June - 1944 **

RECEIPTS

Adjustment by dealer for loss of 7 chicks	\$ 1.01
Value of litter as manure at end of brooding period (estimate)	10.00
Sale of 892 birds weighing 2,527 pounds @ 28.37¢ per pound	716.95
TOTAL	\$ 727.96

EXPENSES

1,000 day-old baby chicks	143.86
Interest on chicks and recording charge	3.08
10,036 pounds of feed	443.63
Medicine	2.69
Insurance	4.35
One load of shavings for litter (estimate)	10.00
Fuel cost - coal (estimate)	25.00
Depreciation on brooder house and cost of upkeep @ \$35 per year on a house valued at \$175.00 used 9 months per year is \$3.22 per month, or for ninety days (estimate)	9.66
Depreciation and upkeep cost on equipment \$12 per year, or \$1.33 per month, based upon 9 months usage annually (estimate)	3.99
Interest on investment of \$235 in house and equipment @ 8% per year is \$18.80 annually, or \$2.09 per month, based upon 9 months use per year	6.27
TOTAL	652.53
LABOR INCOME	\$ 75.43

* Based upon records of 19 producers and 28,000 day-old baby chicks

** Period baby chicks were started

PRODUCTION COSTS - 1,000 BROILERS*
July, Aug., and Sept. - 1944**

RECEIPTS

Adjustment by dealer for loss of 37 chicks	\$ 5.37	
Value of litter as manure at end of brooding period	10.00	
Sale of 890 broilers weighing 2,456 pounds, @ 28.80 cents per pound	707.42	
TOTAL		\$ 722.79

EXPENSES

1,000 day-old baby chicks	145.17	
Interest on chicks and recording charge	3.52	
9,433 pounds of feed	400.61	
Medicine	2.27	
Insurance	3.48	
One load shavings for litter (estimate)	10.00	
Fuel cost - coal (estimate)	20.00	
Depreciation on brooder house and cost of upkeep @ \$35 per year on a house valued at \$175, used 9 months per year, or \$3.22 per month. For ninety days (estimate)	9.66	
Depreciation and upkeep cost on equipment -- \$12 per year, or \$1.33 per month, based upon 9 months usage (estimate)	3.99	
Interest on investment of \$235 in house and equipment @ 8% per year; \$18.80 annually, or \$2.09 per month, based upon nine months use (estimate)	6.27	
TOTAL		604.97
LABOR INCOME		\$ 117.82

* Based upon records of 17 producers and 32,090 day-old baby chicks

** Period baby chicks were started

1. *Pharmaceuticals* (1997) 10, 11.

$$64. \quad \frac{1}{2} \ln \left| \frac{x+1}{x-1} \right| + \frac{1}{2} \ln \left| \frac{x+2}{x-2} \right| + \frac{1}{2} \ln \left| \frac{x+3}{x-3} \right| + \frac{1}{2} \ln \left| \frac{x+4}{x-4} \right| + \frac{1}{2} \ln \left| \frac{x+5}{x-5} \right| + \frac{1}{2} \ln \left| \frac{x+6}{x-6} \right| + \frac{1}{2} \ln \left| \frac{x+7}{x-7} \right| + \frac{1}{2} \ln \left| \frac{x+8}{x-8} \right| + \frac{1}{2} \ln \left| \frac{x+9}{x-9} \right| + \frac{1}{2} \ln \left| \frac{x+10}{x-10} \right|$$
[illegible]



